

Amendments to the Claims:

1. (Currently Amended) A two-dimensional photonic crystal having a slab-shaped body in which modified refractive index areas are cyclically arranged, the modified refractive index areas having the same shape and having a refractive index that differs from that of the body, ~~wherein:~~wherein:

a plane shape of each modified refractive index area is a polygon whose corners are ~~removed~~removed so that an area fraction FF of the modified refractive index areas in the body is enhanced.

2. (Withdrawn) The two-dimensional photonic crystal according to claim 1, wherein:

the modified refractive index area has a 3m-symmetrical shape.

3. (Withdrawn) The two-dimensional photonic crystal according to claim 2, wherein:

the polygon is an equilateral triangle.

4. (Currently Amended) The two-dimensional photonic crystal according to claim 1, ~~wherein:~~wherein:

the corners are removed along an arc.

5. (Previously Presented) The two-dimensional photonic crystal according to claim 4, wherein:

the modified refractive index areas are arranged in a triangular lattice pattern;

the polygon is an equilateral triangle;

the refractive index of the body is within a range from 3.15 to 3.55; and

a radius r_a of the arc satisfies a following equation:

$$0 < r_a < [1.23(FF-0.34)^{0.5} - 1.28(FF-0.34) + 1.03(FF-0.34)^2],$$

where FF is an area fraction of the modified refractive index areas in the body.

6. (Withdrawn-Currently Amended) The two-dimensional photonic crystal according to claim 1, wherein:
~~an area~~ the area fraction FF of the modified refractive index areas in the body is within a range from 0.45 to 0.85./

7. (Withdrawn) The two-dimensional photonic crystal according to claim 6, wherein:

the FF value is within a range from 0.5 to 0.70.

8. (Withdrawn) The two-dimensional photonic crystal according to claim 1, wherein:

each modified refractive index area consists of holes.

9. (Withdrawn) An optical waveguide device, comprising:
a two-dimensional photonic crystal according to claim 1, in which a linear defect of the modified refractive index areas is created.

10. (Withdrawn) An optical resonator device, comprising:
a two-dimensional photonic crystal according to claim 1, in which a point-like defect of the modified refractive index areas is created.

11. (Withdrawn) An optical multiplexer/demultiplexer, comprising:
a two-dimensional photonic crystal according to claim 1;
at least one optical waveguide including a linear defect of the modified refractive index areas created in the two-dimensional photonic crystal; and
at least one optical resonator including a point-like defect of the modified refractive index areas created in a vicinity of the optical waveguide.